

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant(s): Eiichiro ONO and Yoshikazu TANAKA
 Int'l Application No.: PCT/JP2004/014696
 Application No.: **NEW APPLICATION**
 Filed: March 29, 2006
 For: A GENE ENCODING AN ENZYME FOR CATALYZING
 BIOSYNTHESIS OF LIGNAN, AND USE THEREOF

**INFORMATION DISCLOSURE STATEMENT
 (SUBMISSION CONCURRENT WITH THE
 FILING OF A NEW PATENT APPLICATION)**

Customer Service Window
 Randolph Building
 401 Dulany Street
 Alexandria, VA 22314
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March 29, 2006

Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications, or other information submitted for consideration by the Office are listed on PTO-1449, attached hereto.

II. COPIES

- ☐ Submitted herewith is a legible copy of (i) each U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.
- ☒ This application is a National Phase of a PCT application. Some or all of the documents listed on the PTO-1449 are not enclosed because they were cited in the International Search Report and copies should be forwarded from the International Search Authority. If copies are needed, please contact the undersigned.

- ☒ Because the present application is being filed after June 30, 2003, no copies of the U.S. patents or U.S. patent application publications which are listed on the attached Form 1449 are enclosed pursuant to the waiver of 37 C.F.R. § 1.98(a)(2)(i). Any foreign patent documents or non-patent literature listed on the attached Form 1449 are enclosed herewith.

III. CONCISE EXPLANATION OF THE RELEVANCE
(check at least one box)

a. ☒ **DOCUMENTS IN THE ENGLISH LANGUAGE**

Some of the attached patents, publications, or other information in the English language do not require a statement of relevancy.

b. ☒ **DOCUMENTS NOT IN THE ENGLISH LANGUAGE**

A concise explanation of the relevance of all patents, publications, or other information listed that is not in the English language is as follows:

Many of the documents have been discussed in the PCT Search Report, the PCT Preliminary Examination Report, and/or throughout the specification. The PCT Search Report and PCT Preliminary Examination Report indicate the degree of relevance found by the PCT Office, thereby satisfying the requirement for a concise explanation. See MPEP 609(A)(3).

c. ☒ **ENGLISH LANGUAGE SEARCH REPORT**

An English language version of the search report or action that indicates the degree of relevance found by the foreign office is attached, thereby satisfying the requirement for a concise explanation. See MPEP 609(A)(3).

d. ☒ **OTHER**

The following additional information is provided for the Examiner's consideration.

USP 5,902,458 corresponds to JP 10-7676 and WO 98/20113 corresponds to JP 2001-507931.

e. ☐ **EQUIVALENCY DOCUMENTS**

New PCT National Phase Application
Docket No. 12480-000174/US

FEES

This Information Disclosure Statement is being filed concurrently with the filing of a new patent application; therefore, no fee is required.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule and charge the appropriate fee to Deposit Account No. 08-0750.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C.

By:


Donald J. Daley, Reg. No. 34,313

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Enclosures: ☒ Form PTO-1449(s)
☒ Documents
☒ International Search Report (PCT/ISA/210)

FORM HDP-1449 (Based on Form PTO-1449)

PATENT AND TRADEMARK OFFICE
INFORMATION DISCLOSURE CITATION
 (Use several sheets if necessary)

Sheet 1 of 2

ATTORNEY DOCKET NO.

12480-000174/US

SERIAL NO.

NEW APPLICATION

APPLICANT

Eiichiro ONO et al.

FILING DATE

March 29, 2006

GROUP

Unknown

U.S. PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
		5,902,458	05/11/1999	Sugiura et al.		

FOREIGN PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Country	Class/ Subclass	Translation Yes	No
JP		2001-139579	05/22/2001	Japan		Abstract	
JP		10-007676	01/13/1998	Japan		Abstract	
JP		2001-507931	06/19/2001	Japan			
WO		WO 98/20113	05/14/1998	WIPO			

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
		N.G. LEWIS et al., "Lignans: Biosynthesis and Function", Comprehensive natural products chemistry vol. 1, 1999, pp. 639-665, and 690-706
		Y. JIAO et al., "FURANOFURAN LIGNAN METABOLISM AS A FUNCTION...", Phytochemistry Vol. 49, No. 2, 1998, pp. 387-394
		L.B. Davin et al., "Dirigent Proteins and Dirigent Sites Explain...", Plant Physiology vol. 123 pp. 453-461, June 2000
		A.T. Dinkova-Kostova et al., "(+)-Pinoresinol/(+)-Lariciresinol Reductase from Forsythia intermedia", The Journal of Biological Chemistry vol. 271, No. 46, November 15, 1996, pp.29473-29482
		M. Fujita et al., "Recombinant Pinoresinol-Lariciresinol Reductase form..." The Journal of Biological Chemistry vol. 274, No. 2, January 8, 1999, pp. 618-627

Examiner:

Date Considered:

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1AP2006-106 2006

<p>FORM HDP-1449 (Based on Form PTO-1449)</p> <p>PATENT AND TRADEMARK OFFICE</p> <p>INFORMATION DISCLOSURE CITATION</p> <p>(Use several sheets if necessary)</p> <p>Sheet 2 of 2</p>	ATTORNEY DOCKET NO.		SERIAL NO.
	12480-000174/US		NEW APPLICATION
	APPLICANT		
	Eiichiro ONO et al		
	FILING DATE	GROUP	
March 29, 2006	Unknown		

	M. Fujita et al., "Recombinant Pinoresinol-Lariciresinol Reductase form..." The Journal of Biological Chemistry vol. 274, No. 2, January 8, 1999, pp. 618-627
	Zhi-Qiang XIA et al., "Secoisolariciresinol Dehydrogenase Purification,...", The Journal of Biological Chemistry vol. 276, No. 16, April 20, 2001, pp. 12614-12623
	XIA Z-Q et al. "Dirigent-mediated podophyllotoxin biosynthesis in Linum flavum and Podophyllum peltatum" PHYTOCHEMISTRY, PERGAMON PRESS, GB, vol. 55, no.6, November 2000 (2000-11), pages 537-549, XP004291678
	GANG D R et al. "Regiochemical Control of Monolignol Radical Coupling: A New Paradigm for Lignin and Lignan Biosynthesis" Chemistry and Biology, Current Biology, London , GB, vol. 6, no. 3, March 1999 (1999-03), pages 143-151, XP000995932 ISSN:1074-5521
	Overkamp Stefan et al. "Cloning and characterization of eight cytochrome p450 cDNAs from chickpea (Cicer arietinum L.) cell suspension cultures" PLANT SCIENCE (SHANNON), vol. 155, no. 1, June 2000 (2000-06), pages 101-108, XP002314013 ISSN:0168-9452
	12 December 2001 (2001-12-12), "Arabidopsis thaliana cytochrome P450-like protein (F6G17.20) mRNA, complete cds." XP002314014
	5 June 2002 (2002-06-05) "Arabidopsis thaliana cytochrome P450 protein (At3g28740) mRNA, complete cds." XP002314015
	27 August 2001 (2001-08-27), "Arabidopsis thaliana cytochrome P450 protein (At3g28740) mRNA, complete cds." XP002314016
	14 June 2002 (2002-06-14), "Arabidopsis thaliana clone 253698 mRNA, complete cds." XP002314017
	Kato M J et al. "Biosynthesis of antioxidant lignans in Sesamum indicum seeds" PHYTOCHEMISTRY, PERGAMON PRESS, GB, vol. 47, no. 4, February 1998 (998-02),, pages 583-591, XP004293758 ISSN:0031-9422 page 587, left column
	Ikezawa Nobuhiro et al. "Molecular cloning and characterization of CYP719, a methylenedioxy bridge-forming enzyme that belongs to a novel P450 family, from cultured Coptis japonica cells." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 278, no. 40, 3 October 2003 (2003-10-03), pages 38557-38565, XP002313984 ISSN:0021-9258
	Suh Mi Chung et al. "Comparative analysis of expressed sequence tags from Sesamum indicum and Arabidopsis thaliana developing seeds." PLANT MOLECULAR BIOLOGY, vol. 52, no. 6, August 2003 (2003-08) pages 1107-1123, XP002313982 ISSN:0167-4412 page 1115-1119
	International Search Report (PCT/ISA210)

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